

REMARKS

INTRODUCTION:

In accordance with the foregoing, claims 1, 3-10, 15, 18, 19, 21, 29, 32, 34, 36-38, 40, and 42 have been amended, and claims 47 and 48 have been added.

No new matter is being presented, and approval and entry of the foregoing amendments and new claims are respectfully requested.

Claims 1-48 are pending and under consideration. Reconsideration is requested.

REJECTION UNDER 35 U.S.C. §112:

In the Office Action at page 2, the Examiner rejects claims 1-46 under 35 U.S.C. §112, second paragraph, as being indefinite with regard to the term "conductive polymeric dispersant." This rejection is respectfully traversed and reconsideration is requested.

As a point of clarification, claims 41 and 46 do not recite the term "conductive polymeric dispersant." As such, it is respectfully requested that the Examiner reconsider and withdraw the rejection of claims 41 and 46.

As evidence that the term "conductive polymeric dispersant" is indefinite, the Examiner notes that the conductive polymeric dispersants set forth in claim 19 include non-conductive and conductive dispersants. By way of review, claim 19 has been amended to replace the recited polyacrylate-based resin with polypropylene oxide. As noted in at least paragraph 57 of the instant application, polypropylene oxide is one example of a conductive polymeric dispersant according to an aspect of the invention. A similar amendment has been made in claim 34. As such, the recited dispersants in claims 19 and 34 correspond to the example conductive polymeric dispersants in paragraph 0057.

By way of review, compliance with the definiteness requirement in 35 U.S.C. §112, second paragraph, is determined using the factors outlined in MPEP 2173.02. The factors include:

- (A) The content of the particular application disclosure;
- (B) The teachings of the prior art; and
- (C) The claim interpretation that would be given by one possessing the ordinary level of skill in the pertinent art at the time the invention was made.

It is respectfully submitted that one of ordinary skill in the art, when reviewing the claims in view of the prior art, the specification, and the claim meaning of the claims, would understand the term "conductive polymeric dispersant." For example, while not limited to the description in

paragraph 0056, the conductive polymeric dispersant is described as forming a conductive network to improve the electrochemical characteristics of the active material. Examples of conductive polymeric dispersants are provided in paragraph 0057. Moreover, it is believed that one of ordinary skill in the art would understand conductive polymeric dispersants refer to polymeric dispersants having conductive properties. As such, it is respectfully submitted that the term "conductive polymeric dispersant" is sufficiently well defined in light of the prior art, the specification, and/or in view of the understanding of one of ordinary skill in the art such that claims 1, 5, 6, 15, 21, 33, 36, 42, and 45 remain compliant with 35 U.S.C. §112.

Additionally, the Examiner rejects claims 18 and 32 under 35 U.S.C. §112 for reciting an average particle diameter when claims 18 and 32 do not require the coating to contain particulates. As a point of clarification, claims 18 and 32, as previously written, did not exclude the possibility of the coating containing particulates such that claims 18 and 32 as would have been understood by one of ordinary skill in the art and were therefore compliant with 35 U.S.C. §112. MPEP 2173.04. However, in order to clarify claims 18 and 32, claims 18 and 32 have been amended to positively recite the particulates without narrowing the scope of the claims.

For similar reasons, claims 10 and 29 have been amended to positively recite the existence of particulates having an average diameter without narrowing the scope of the claims.

The Examiner further rejects claim 8 as lacking antecedent basis for the carbon-based material. Since claim 8 has been amended to depend from claim 7 consistent with the Examiner's comments, it is respectfully requested that the Examiner reconsider the rejection of claim 8 under 35 U.S.C. §112.

Also, the Examiner rejects claim 20 as being confusing since the weight fraction of the conductive polymer dispersant is recited as if the conductive polymer dispersant is part of the conductive agent. By way of review, claim 20 recites, among other features, that "the coating comprises the another mixture of the conductive agent and the conductive polymeric dispersant," where "an amount of the conductive polymeric dispersant is in a range of 0.1 to 20 wt% of the conductive agent." As such, the weight percentage recited in claim 20 is of the conductive polymer dispersant as compared to the weight of the conductive agent within the another mixture. Therefore, it is respectfully requested that the Examiner reconsider and withdraw the rejection of claim 20 under 35 U.S.C. §112.

Claims 2-4, 7, 9-14, 16, 17, 19, 22-31, 33-35, 37-40, 43, and 44 are deemed patentable due at least to their depending from corresponding claims 1, 21, 36, and 42.

REJECTION UNDER 35 U.S.C. §102:**1. Rejection of claims 1, 13, and 19 in view of Hoshino et al.**

In the Office Action at page 3, the Examiner rejects claims 1, 13, and 19 under 35 U.S.C. §102 in view of Hoshino et al. (Japanese Patent Publication No. 2001-202958). This rejection is respectfully traversed and reconsideration is requested.

By way of review, Hoshino et al. suggests a carbon particle coated with silver oxide on a surface of the carbon particle. However, as noted by the Examiner on page 3 of the Office Action, Hoshino et al. does not teach a dispersant in the coating. As such, it is respectfully submitted that Hoshino et al. does not disclose or suggest "a coating on said material, said coating including one of a mixture of a conductive agent and a dispersant and another mixture of the conductive agent and a conductive polymeric dispersant" as recited in claim 1.

Claims 13 and 19 are deemed patentable due at least to their depending from claim 1.

2. Rejection of claims 1, 13, 19, 21, 30, 36, and 42 in view of Shinyashiki et al.

In the Office Action at page 3, the Examiner rejects claims 1, 13, 19, 21, 30, 36, and 42 under 35 U.S.C. §102 in view of Shinyashiki et al. (Japanese Patent Publication No. 11-113564). This rejection is respectfully traversed and reconsideration is requested.

By way of review, Shinyashiki et al. suggests a cadmium negative electrode 10 having a periphery area 11 coated with a carbon coating. However, as noted by the Examiner on page 3 of the Office Action, Shinyashiki et al. does not teach a dispersant in the coating. As such, it is respectfully submitted that Shinyashiki et al. does not disclose or suggest "a coating on said material, said coating including one of a mixture of a conductive agent and a dispersant and another mixture of the conductive agent and a conductive polymeric dispersant" as recited in claim 1.

For similar reasons, it is respectfully submitted that Shinyashiki et al. does not disclose or suggest the invention recited in claims 21, 36, and 42.

Claims 13, 19, and 30 are deemed patentable due at least to their depending from corresponding claims 1 and 21.

3. Rejection of claims 1, 13, 16, 17, 19, 21, 30, 31, 36, and 42 in view of Sakamoto et al.

In the Office Action at pages 3-4, the Examiner rejects claims 1, 13, 16, 17, 19, 21, 30, 31, 36, and 42 under 35 U.S.C. §102 in view of Sakamoto et al. (U.S. Patent No. 6,255,019). This rejection is respectfully traversed and reconsideration is requested.

By way of review, Sakamoto et al. suggests nickel hydroxide particles coated with a cobalt oxide including Ni or Mn. However, as noted by the Examiner on page 4 of the Office

Action, Sakamoto et al. does not teach a dispersant in the coating. As such, it is respectfully submitted that Sakamoto et al. does not disclose or suggest "a coating on said material, said coating including one of a mixture of a conductive agent and a dispersant and another mixture of the conductive agent and a conductive polymeric dispersant" as recited in claim 1.

For similar reasons, it is respectfully submitted that Sakamoto et al. does not disclose or suggest the invention recited in claims 21, 36, and 42.

Claims 13, 16, 17, 19, 30 and 31 are deemed patentable due at least to their depending from corresponding claims 1 and 21.

4. Rejection of claims 1, 13, 19, 21, 30, 36, and 42 in view of Abe et al.

In the Office Action at page 4, the Examiner rejects claims 1, 13, 19, 21, 30, 36, and 42 under 35 U.S.C. §102 in view of Abe et al. (U.S. Patent No. 6,258,483). This rejection is respectfully traversed and reconsideration is requested.

By way of review, Abe et al. suggests nickel hydroxide particles coated with a cobalt hydroxide. However, as noted by the Examiner on page 4 of the Office Action, Abe et al. does not teach a dispersant in the coating. As such, it is respectfully submitted that Abe et al. does not disclose or suggest "a coating on said material, said coating including one of a mixture of a conductive agent and a dispersant and another mixture of the conductive agent and a conductive polymeric dispersant" as recited in claim 1.

For similar reasons, it is respectfully submitted that Abe et al. does not disclose or suggest the invention recited in claims 21, 36, and 42.

Claims 13, 19 and 30 are deemed patentable due at least to their depending from corresponding claims 1 and 21.

5. Rejection of claims 1, 13, 16, 17, 19, 21, 30, 31, 36, and 42 in view of Ohta et al.

In the Office Action at pages 4-5, the Examiner rejects claims 1, 13, 16, 17, 19, 21, 30, 31, 36, and 42 under 35 U.S.C. §102 in view of Ohta et al. (U.S. Patent Publication No. 2001/0018148). The Examiner restates the rejection using the resulting U.S. Patent No. 6,562,516 on page 8. These rejections are respectfully traversed and reconsideration is requested.

By way of review, Ohta et al. suggests nickel hydroxide particles coated with a compound of a cobalt having a mean valence over 2 and a compound of at least one element selected from the group consisting of Ca, Sr, Ba, Cu, Ag, Cd, Y, Yb, Ce, Sm, Gd, and Er. However, as noted by the Examiner on page 5 of the Office Action, Ohta et al. does not teach a dispersant in the coating. As such, it is respectfully submitted that Ohta et al. does not disclose or suggest "a coating on said material, said coating including one of a mixture of a conductive agent and a

dispersant and another mixture of the conductive agent and a conductive polymeric dispersant" as recited in claim 1.

For similar reasons, it is respectfully submitted that Ohta et al. does not disclose or suggest the invention recited in claims 21, 36, and 42.

Claims 13, 16, 17, 19, 30 and 31 are deemed patentable due at least to their depending from corresponding claims 1 and 21.

6. Rejection of claims 1-3, 7, 13, 19, 21-23, 30, 36, and 42 in view of Nimon et al.

In the Office Action at page 5, the Examiner rejects claims 1-3, 7, 13, 19, 21-23, 30, 36, and 42 under 35 U.S.C. §102 in view of Nimon et al. (U.S. Patent No. 6,537,701). The rejection is respectfully traversed and reconsideration is requested.

By way of review, Nimon et al. suggests coating an anode 100 having a lithium core 102 coated with an aluminum layer 104 which becomes a lithium-aluminum layer 106. After the anode is immersed in an electrolytic solution 110, the lithium aluminum layer 106 forms a passivation layer 108. (Col. 6, line 55 to col. 7, line 19; FIGs. 1-3, 5A and 5B). However, as noted by the Examiner on page 5 of the Office Action, Nimon et al. does not teach a dispersant in the coating. As such, it is respectfully submitted that Nimon et al. does not disclose or suggest "a coating on said material, said coating including one of a mixture of a conductive agent and a dispersant and another mixture of the conductive agent and a conductive polymeric dispersant" as recited in claim 1.

For similar reasons, it is respectfully submitted that Nimon et al. does not disclose or suggest the invention recited in claims 21, 36, and 42.

Claims 2, 3, 7, 13, 19, 22, 23, and 30 are deemed patentable due at least to their depending from corresponding claims 1 and 21.

7. Rejection of claims 1, 2, 7, 9, 13, 19, 21, 22, 27, 36, and 42 in view of Koga et al.

In the Office Action at pages 5-6, the Examiner rejects claims 1, 2, 7, 9, 13, 19, 21, 22, 27, 36, and 42 under 35 U.S.C. §102 in view of Koga et al. (U.S. Patent No. 6,534,217). The rejection is respectfully traversed and reconsideration is requested.

By way of review, Koga et al. suggests a positive electrode material including a particulate center and a coating portion of a conductive oxide. (Col. 2, lines 43-56 and col. 3, lines 16-24, 39-44). However, as noted by the Examiner on page 6 of the Office Action, Koga et al. does not teach a dispersant in the coating. As such, it is respectfully submitted that Koga et al. does not disclose or suggest "a coating on said material, said coating including one of a mixture of a conductive agent and a dispersant and another mixture of the conductive agent and a conductive polymeric dispersant" as recited in claim 1.

For similar reasons, it is respectfully submitted that Koga et al. does not disclose or suggest the invention recited in claims 21, 36, and 42.

Claims 2, 7, 9, 13, 19, 22, and 27 are deemed patentable due at least to their depending from corresponding claims 1 and 21.

8. Rejection of claims 1, 13, 16, 17, 19, and 36 in view of Shinyama et al.

In the Office Action at page 6, the Examiner rejects claims 1, 13, 16, 17, 19, and 36 under 35 U.S.C. §102 in view of Shinyama et al. (U.S. Patent No. 6,534,217). The rejection is respectfully traversed and reconsideration is requested.

By way of review, Shinyama et al. suggests a substrate 1 coated with an active material layer 2. A cobalt layer 3 is deposited on the active material layer 2. Alternately, an intermediate layer 4 is disposed between the substrate 1 and the active material layer 3. (Col. 10, line 55 to col. 11, line 16, col. 22, lines 37-63; FIGs. 1-3). However, as noted by the Examiner on page 6 of the Office Action, Shinyama et al. does not teach a dispersant in the coating. As such, it is respectfully submitted that Shinyama et al. does not disclose or suggest "a coating on said material, said coating including one of a mixture of a conductive agent and a dispersant and another mixture of the conductive agent and a conductive polymeric dispersant" as recited in claim 1.

For similar reasons, it is respectfully submitted that Shinyama et al. does not disclose or suggest the invention recited in claim 36.

Claims 13, 16, 17 and 19 are deemed patentable due at least to their depending from claim 1.

9. Rejection of claims 1-4, 7, 13, 16, 18, 19, 21-24, 30, 31, 33, 36, 42, 45, and 46 in view of Nakagiri et al.

In the Office Action at pages 6-7, the Examiner rejects claims 1-4, 7, 13, 16, 18, 19, 21-24, 30, 31, 33, 36, 42, 45, and 46 under 35 U.S.C. §102 in view of Nakagiri et al. (U.S. Patent No. 6,558,841). The rejection is respectfully traversed and reconsideration is requested.

By way of review, Nakagiri et al. suggests an active material particle coated with an electronically conductive coating. The coating is of a conductive polymer including such as polyaniline, polypyrrole, polythiophene, and polyphenylene derivative. The coating can also be of a carbonaceous material or a metal material. (Col. 5, lines 37-67). However, there is no suggestion of a dispersant used in the coating, or that the conductive polymer acts as a dispersant in the coating. As such, it is respectfully submitted that Nakagiri et al. does not disclose or suggest "a coating on said material, said coating including one of a mixture of a conductive agent and a dispersant and another mixture of the conductive agent and a conductive polymeric dispersant" as recited in claim 1.

conductive polymeric dispersant" as recited in claim 1.

For similar reasons, it is respectfully submitted that Nakagiri et al. does not disclose or suggest the invention recited in claims 21, 33, 36, 42, 45, and 46.

Claims 2-4, 7, 13, 16, 18, 19, 22-24, 30, and 31 are deemed patentable due at least to their depending from corresponding claims 1 and 21.

10. Rejection of claims 1, 13, 19, 21, 30, 36, and 42 in view of Nishiyama et al. or Maeda et al.

In the Office Action at pages 7-8, the Examiner rejects claims 1, 13, 19, 21, 30, 36, and 42 under 35 U.S.C. §102 in view of Nishiyama et al. (U.S. Patent No. 6,573,006) or Maeda et al. (U.S. Patent No. 6,338,917). The rejection is respectfully traversed and reconsideration is requested.

By way of review, Nishiyama et al. suggests a nickel hydroxide particle coated with a conductive layer including metal nitrides including TiN, ZrN, HfN, VN, and NbN. (Col. 3, lines 31-42, col. 4, lines 12-25 of Nishiyama et al.) Maeda et. al. suggests a nickel oxide covered with an electrically conductive material, which is metallic Co or a Co oxide. (Col. 3, lines 8-30 of Maeda et al.) However, as also acknowledged by the Examiner on page 8 of the Office Action, neither Nishiyama et al. nor Maeda et. al. disclose the use of a dispersant in the coatings. As such, it is respectfully submitted that neither Nishiyama et al. nor Maeda et. al. disclose or suggest "a coating on said material, said coating including one of a mixture of a conductive agent and a dispersant and another mixture of the conductive agent and a conductive polymeric dispersant" as recited in claim 1.

For similar reasons, it is respectfully submitted that neither Nishiyama et al. nor Maeda et. al. does not disclose or suggest the invention recited in claims 21, 36, and 42.

Claims 13, 19, and 30 are deemed patentable due at least to their depending from corresponding claims 1 and 21.

REJECTION UNDER 35 U.S.C. §103:

In the Office Action at page 8-9, the Examiner rejects claims 10-12, 20, and 32 under 35 U.S.C. §103 in view of Nakagiri et al. The rejection is respectfully traversed and reconsideration is requested.

The Examiner acknowledges that Nakagiri et al. does not disclose the average diameters and the weight percentages recited in claims 10-12, 20, and 32, but asserts that it would have been obvious to arrive at the recited average diameters and the weight percentages as a matter of determining optimal values within the skill of the ordinary artisan.

Assuming arguendo that the Examiner is correct in these assertions, the Examiner's assertions are not relied upon and do not cure the above noted defect of Nakagiri et al. as applied to claims 1 and 21, from which claims 10-12, 20 and 32 correspondingly depend. As such, it is respectfully submitted that the combination of Nakagiri et al. and the Examiner's assertions do not disclose or suggest the invention recited in claims 10-12, 20 and 32 due at least to the combination not disclosing or suggesting the invention recited in claims 1 and 21.

STATUS OF CLAIMS NOT REJECTED OVER PRIOR ART:

On page 9 of the Office Action, the Examiner notes that claims 5, 6, 15, 25, 26, 28, 29, 34, 35, 37-41, 43, and 44 would be allowable if rewritten to resolve the rejections under 35 U.S.C. §112 and/or to incorporate the features of the claims from which they depend. As claim 14 has not been rejected under 35 U.S.C. §112, it is respectfully submitted that claim 14 would be similarly allowable.

PATENTABILITY OF NEW CLAIMS:

Claims 47 and 48 are deemed patentable due at least to their depending from corresponding claims 1 and 21.

CONCLUSION:

In accordance with the foregoing, it is respectfully submitted that all outstanding objections and rejections have been overcome and/or rendered moot. And further, it is respectfully submitted that all pending claims patentably distinguish over the prior art. Thus, there being no further outstanding objections or rejections, the application is submitted as being in condition for allowance which action is earnestly solicited.

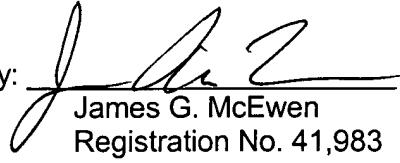
If the Examiner has any remaining issues to be addressed, it is believed that prosecution can be expedited by the Examiner contacting the undersigned attorney for a telephone interview to discuss resolution of such issues.

If there are any additional fees associated with the filing of this Amendment, please charge the same to our Deposit Account No. 19-3935.

Respectfully submitted,

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